

CLAIMS

1. Hoisting frame (1) provided with means (2) arranged on the upper side for connecting thereof to at least two hoisting cables (3) suspended at a mutual distance in longitudinal direction of the hoisting frame (1) and means (4) arranged on the underside for picking up at least one secondary hoisting frame (5), **characterized in that** the frame (1) is adjustable in transverse direction between a retracted position, in which its transverse dimension is at most equal to that of the secondary hoisting frame (5), and an extended position in which its transverse dimension is larger than that of the secondary hoisting frame (5), and the pick-up means (4) are adapted to pick up a single secondary hoisting frame (5) in the retracted position and to pick up two mutually adjacent secondary hoisting frames (5) in the extended position.

2. Hoisting frame (1) as claimed in claim 1, **characterized in that** the frame (1) is divided in longitudinal direction, the frame parts (10) are movable relative to each other at least in transverse direction and the pick-up means (4) comprise a number of pick-up elements (11) distributed over the frame parts (10).

3. Hoisting frame (1) as claimed in claim 2, **characterized by** controllable means (12) for moving the frame parts (10) away from and toward each other.

4. Hoisting frame (1) as claimed in claim 3, **characterized in that** the moving means (12) comprise at least one member (13) of adjustable length which connects the frame parts (10).

5. Hoisting frame (1) as claimed in claim 4, **characterized in that** the moving means (12) comprise at least one actuator (7,8,9,16,31) co-acting with the at least one connecting member (13).

6. Hoisting frame (1) as claimed in claim 4 or 5, **characterized in that** the at least one connecting member (13) is a pivotable arm.

7. Hoisting frame (1) as claimed in claim 6, **characterized in that** the arm (13) is pivotable substantially parallel to a main plane of the hoisting frame (1).

8. Hoisting frame (1) as claimed in any of the claims 5-7, **characterized in that** the at least one pivotable arm (13) is connected to the frame part (10) via a pivot (24), and the actuator (7,8,9,31) is arranged between the arm (13) and the pivot (24).

9. Hoisting frame (1) as claimed in any of the claims 5-8, **characterized by** at least two pivotable arms (13) which are each moved by at least one associated actuator (7,8,9,16,31).

10. Hoisting frame (1) as claimed in claim 9, **characterized in that** at least two actuators (7,8,9,16,31) are connected to at least one of the pivotable arms (13).

11. Hoisting frame (1) as claimed in claim 9 or 10, **characterized in that** the pivotable arms (13) are arranged substantially symmetrically relative to a transverse centre line (C_t-T) of the hoisting frame (1), and the arms (13) on opposite sides of the hoisting frame (1) are pivotable in opposite directions.

12. Hoisting frame (1) as claimed in any of the claims 6-11, **characterized in that** each pivotable arm (13) is substantially symmetrical relative to a longitudinal centre line (C_t-L) of the hoisting frame (1).

13. Hoisting frame (1) as claimed in any of the claims 2-12, **characterized in that** the connecting means (2) are adapted to connect the hoisting frame (1) to at least two pairs of hoisting cables (3) suspended at a distance from each other in longitudinal direction of the hoisting frame (1), and are divided in longitudinal direction such that each frame part (10) can be connected to at least two hoisting cables (3).

14. Hoisting frame (1) as claimed in claim 13, **characterized in that** the connecting means (2) comprise cable pulleys (14), and each frame part (10) carries at

least two cable pulleys (14) placed at a distance from each other in longitudinal direction.

15. Hoisting frame (1) as claimed in claim 14, **characterized in that** the pick-up elements (11) are placed substantially straight under the cable pulleys (14) in the extended position of the hoisting frame (1).

16. Hoisting frame (1) as claimed in any of the foregoing claims, **characterized in that** in the extended position the frame (1) is adjustable in transverse direction in order to vary a space (D) between the two secondary hoisting frames (5).

17. Hoisting frame (1) as claimed in any of the claims 2-16, **characterized in that** the frame parts (10) are pivotable relative to each other in the plane of the hoisting frame (1).

18. Hoisting frame (1) as claimed in any of the claims 2-17, **characterized in that** the frame parts (10) are pivotable relative to each other transversely of the plane of the hoisting frame (1).

19. Hoisting frame (1) as claimed in claims 14 and 18, **characterized by** at least one actuator (18,19) arranged between the rotation axis (36) of one of the cable pulleys (14) and the frame part (10).

20. Hoisting frame (1) as claimed in any of the claims 2-19, **characterized in that** the frame parts (10) are movable relative to each other in longitudinal direction.

21. Hoisting frame (1) as claimed in any of the foregoing claims, **characterized in that** the or each secondary hoisting frame (5) is adjustable in longitudinal direction.

22. Method for transferring loads (6), in particular containers, comprising the steps of:

- a) lowering a hoisting frame (1) as claimed in any of the foregoing claims at a first location,
- b) picking up one load (6) at the first location when the hoisting frame (1) is retracted, or two loads (6) when the hoisting frame (1) is extended,

- c) lifting the hoisting frame (1) with the picked-up load(s) (6),
- d) displacing the hoisting frame (1) with the picked-up load(s) (6) to a second location,
- e) lowering the hoisting frame (1) with the picked-up load(s) (6) at the second location,
- f) uncoupling the load(s) (6) from the hoisting frame (1),
- g) lifting the hoisting frame (1),
- h) moving the hoisting frame (1) from its retracted to its extended position or from its extended to its retracted position, wherein a secondary hoisting frame (5) is coupled on or uncoupled, and
- i) repeating steps (a) to (g).